STATE OF SOUTH CAROLINA

BEFORE THE PUBLIC SERVICE COMMISSION

DOCKET NO. 2021-76-E

In the Matter of: Application of Duke Energy Carolinas, LLC for Approval of Demand-Side Management and Energy Efficiency Rider 13, Decreasing Residential Rates and Increasing Non-Residential Rates	)	**COMMENTS OF SOUTH CAROLINA COASTAL CONSERVATION LEAGUE AND SOUTHERN ALLIANCE FOR CLEAN ENERGY**

The South Carolina Coastal Conservation League ("CCL") and Southern Alliance for Clean Energy ("SACE") submit the following comments on Duke Energy Carolinas, LLC's ("DEC" or "the Company") application for approval of its demand-side management ("DSM") and energy efficiency ("EE") rider for 2022 ("Rider 13").

INTRODUCTION

CCL and SACE continue to support DEC's DSM/EE programs and commend DEC for its role as a regional leader for energy efficiency in the Southeast. These comments aim to provide the Company and the South Carolina Public Service Commission ("Commission") with additional recommendations to build on DEC's programs and achieve deeper energy savings. These comments will provide: 1) a high-level review of DEC's DSM/EE portfolio performance in 2020, with consideration of the impacts from the COVID-19 pandemic; 2) an overview of DEC's DSM/EE savings forecast for 2022, including recommendations to reach 1% annual savings and work more effectively with the Duke Energy DSM/EE Collaborative ("Collaborative"); 3) recommendations to the Commission related to DEC's DSM/EE portfolio. There continue to be significant

efficiency saving opportunities in South Carolina, notably with respect to low-income programs, and we urge DEC to work with the Collaborative to achieve those savings.

REVIEW OF DEC'S 2020 ENERGY SAVINGS PERFORMANCE

A. DEC's energy savings levels declined in 2020, dropping below a 1% savings level for the second year in a row and falling short of the Company's projections.

In 2020, DEC delivered 612.2 GWh of efficiency savings at the meter, equal to 0.76% of the previous year's retail sales.[1] This reflects a nearly 25% decline in total savings from the previous year when the Company reported 0.98% annual efficiency savings. Despite the extraordinary backdrop of the COVID-19 pandemic, 2020 marks a second disappointing year in a row where the Company's DSM/EE activities fell below the 1% savings mark, a threshold that the Company has agreed to work towards.

The 2020 savings fell short of the Company's projections. In DEC's DSM/EE Rider 11 filing, the Company projected annual energy savings equal to 0.84% or the prior-year's retails sales, despite having reported higher actual savings in each of the preceding three years, including 1.11% in 2017 and 1.05% in 2018. Because those projections preceded the COVID-19 pandemic and the lockdowns it precipitated, they understandably did not take those unanticipated circumstances into account. Ultimately, DEC's portfolio of programs achieved approximately 93.5% of its projections for 2020, only moderately lower than expected.

[1] The savings levels presented in these comments refer to the DEC system across North and South Carolina. In 2020, South Carolina's share of DEC's retail sales represented approximately 28.2% of sales across DEC's service territory. DEC Response to SACE et al. Data Request 1-19, Duke Energy Carolinas, LLC Request to Adjust Electric Rates for the Cost of Demand-Side Management and Energy Efficiency Programs, N.C. Utils. Comm'n Docket No. E-7, Sub 1249 (Attached as **SACE/CCL Exhibit 1**).

Historically, DEC's projections have nearly always underestimated its actual energy savings. In 2020, the Company's projections were conservative enough that they were nearly achievable even during a global pandemic. Prior to 2018, it was common for DEC's projections to be 30-40% or more below actual performance, though in recent years performance has exceeded projections by less than 10%.

B. The value of DEC's DSM/EE portfolio continues to significantly exceed its costs.

DEC's DSM/EE portfolio of programs continued to be cost effective and, despite the pandemic, still delivered impressive financial value to customers in 2020. DEC's DSM/EE portfolio had a Utility Cost Test ("UCT") score of 2.96 and a Total Resource Cost ("TRC") score of 2.81, similar to cost effectiveness in 2019.[2] The total net present value ("NPV") of avoided costs in 2020 decreased at a level roughly proportional to declines in total kWh saved, but still amounted to approximately $328 million of financial benefit for customers.[3]

C. DEC's residential portfolio continues to be driven by behavioral programs, whereas a more balanced approach would lead to deeper savings.

Residential programs have made up the majority of savings in DEC's portfolio for the past several years and in 2020 represented 72% of all savings.[1] One residential program, My Home Energy Report ("MyHER"), made up over half of DEC's total savings in 2020 at 51% of reported system energy reductions. As we have expressed numerous times in previous years, we are concerned by DEC's heavy reliance on a program with such limited measure-life persistence to make up the bulk of its DSM/EE portfolio savings. Adding to,

[2] DEC Response to SACE et al. Data Request 1-4, Duke Energy Carolinas, LLC Request to Adjust Electric Rates for the Cost of Demand-Side Management and Energy Efficiency Programs, N.C. Utils. Comm'n Docket No. E-7, Sub 1249 (Attached as **SACE/CCL Exhibit 2**).
[3] *Id*.

expanding, or modifying programs that target the largest residential end uses of electricity – such as space heating & cooling and water heating will achieve deeper and longer-lived savings and lead to a more balanced and robust program portfolio going forward.[1]

D. Non-residential savings continued to decline in 2020.

In 2020, DEC's non-residential programs made up just 28% of total energy efficiency savings.[1] Even pre-pandemic, DEC demonstrated a troubling trend of falling savings among commercial and industrial customers and being unable to meet its projections for non-residential programs. In 2020, DEC's non-residential efficiency program savings declined 37% from the previous year, a substantially sharper drop than was seen for residential programs, likely resulting from the economic decline brought on by the COVID-19 pandemic.

In particular, commercial and industrial opt outs continue to negatively impact DEC's ability to reach higher savings benchmarks, due to this group's large share of energy consumption. In 2020, approximately 61.6% of DEC's commercial and industrial energy consumption opted out of the utility's energy efficiency offerings (29,277 GWh out of 47,543 GWh of DEC's non-residential retail sales).[4] Customers that opt out withhold their proportionate share of funding for DEC's energy efficiency programs, and do not contribute to the utility's energy efficiency savings. Though commercial and industrial customers who opt-out certify that they have implemented their own energy-efficiency or demand-side management measures, there is no requirement to report any resulting savings to the Company or the Commission and nothing in DEC's filing indicates the extent to which such savings are occurring. This is unfortunate for many reasons, including that

[4] **SACE/CCL Exhibit 2**, *supra* note 1.

commercial and industrial energy efficiency are frequently among the lowest cost source per kWh saved. Such programs also tend to yield saving at a scale that leads to substantially reduced costs for participating customers and the utility system as a whole.

E. The COVID-19 pandemic negatively impacted DEC'S DSM/EE Performance in 2020, hitting efficiency programs for low-income customers the hardest.

Despite lower performance in 2020 relative to previous years, DEC is to be commended for proactively adjusting its approach in the face of unprecedented challenges. DEC's overall energy efficiency performance was relatively high in comparison to several other utilities in the region, particularly those in Georgia and Florida.[5] This was in part because DEC was among the first utilities in the Southeast to implement new safety protocols enabling it to resume in-home energy efficiency services. Overall, DEC's response to the pandemic indicates a level of commitment, flexibility, and initiative that will serve the Company well if it accepts the challenge of again meeting and surpassing the savings target of 1% of prior-year retail sales.

In the early days of the pandemic, when on-site efficiency services ground to a halt for DEC and all utilities across the country, the steepest declines in efficiency program savings were often in programs that serve, low-income customers – the very people who needed them most. In 2020, energy saved in the DEC Low-Income Energy Efficiency and Weatherization Assistance program decreased by 75%, making it one of the hardest-hit programs.[6] Likewise, the Multi-Family Energy Efficiency program, which has some

[5] However, DEC's performance trailed far behind that of Entergy Arkansas, which was actually able to improve program performance in spite of the pandemic. Notably, the Arkansas Public Service Commission has established annual efficiency savings targets of 1.2%, which Entergy Arkansas was able to surpass even during the pandemic.

[6] DEC Response to SACE et al. Data Request 1-21, Duke Energy Carolinas, LLC Request to Adjust Electric Rates for the Cost of Demand-Side Management and Energy Efficiency Programs, N.C. Utils. Comm'n Docket No. E-7, Sub 1249 (Attached as **SACE/CCL Exhibit 3**).

degree of overlap with the low-income customer segment, was impacted with an 81% savings reduction in 2020. Both of these programs experienced about twice the level of negative impact as general residential programs, while short-lived measures in the MyHER program experienced a very slight uptick.

F. DEC does not yet report actual South Carolina savings performance for key low-income programs.

Historically, the performance of DEC's Low Income Energy Efficiency and Weatherization Assistance program in South Carolina has trailed far below the program's performance in North Carolina. However, rather than reporting actual in-state participation in response to specific discovery on the subject, DEC has attributed program savings to South Carolina using a fixed percentage proportionate to its energy sales in the state. This is despite the fact that the Company does track South Carolina-specific performance for this program and has periodically presented such findings to the Collaborative. There are historic reasons that have made delivery of the program more challenging in South Carolina, and finding new strategies for deployment has been a frequent topic of discussion at the Collaborative. Going forward it will be important for DEC to report on actual program performance in South Carolina, rather than using a fixed percentage attribution, to evaluate how effectively DEC is serving the needs of low-income customers with this program.

REVIEW OF DEC'S 2022 ENERGY SAVINGS FORECAST

A. DEC's projected energy savings levels for 2022 fall just short of 1% annual savings, but the benchmark is imminently attainable.

DEC projects that it will achieve approximately 766.7 GWh of energy savings at the meter in 2022.[7] This projection reflects a slight decline and would also fall short of the 1% savings benchmark. DEC's 2022 forecast of 766.7 GWh of energy savings would lead to an estimated 0.96% of prior-year retail sales,[8] compared to 0.98% in 2019,[9] 1.05% in 2018,[10] and for 2017 DEC reported 880 GWh of savings for 1.11% of prior-year retail sales.[11] Taken from the recent peak in 2017, DEC is projecting a 13% decline in savings for 2022. DEC has not indicated whether or how it aims to reverse its declines and return to the higher savings levels it achieved in 2017, 2018, and 2019.

DEC is forecasting savings for 2022 that are higher than it projected in Rider 12 for 2021 (0.96% of retail sales vs. 0.89%, respectively), which is directionally encouraging. But these projections are still disappointing because the 2022 forecast is so close to the 1% target that has been a highly emphasized priority for many years among Collaborative participants. The 1% annual savings target continues to be relevant for public policy purposes for several reasons. Notably, research suggests that energy efficiency savings trend higher in jurisdictions that have enacted savings targets.[12] As part of its merger with Progress Energy, DEC committed to achieving 1% annual efficiency savings, and 7%

[7] N.C. Utils. Comm'n Docket No. E-7, Sub 1249, Evans Exhibit 1 at 4, available at https://starw1.ncuc.net/NCUC/ViewFile.aspx?Id=96481a62-4d2c-4803-b096-1e3d8a4aa9e8.
[8] DEC Response to SACE et al. Data Request 1-18, Duke Energy Carolinas, LLC Request to Adjust Electric Rates for the Cost of Demand-Side Management and Energy Efficiency Programs, N.C. Utils. Comm'n Docket No. E-7, Sub 1249 (Attached as **SACE/CCL Exhibit 4**).
[9] DEC Response to SACE et al. Data Request 1-14, Duke Energy Carolinas, LLC Request to Adjust Electric Rates for the Cost of Demand-Side Management and Energy Efficiency Programs, N.C. Utils. Comm'n Docket No. E-7, Sub 1249 (Attached as **SACE/CCL Exhibit 5**).
[10] DEC Response to SACE et al. Data Request 2-2, Duke Energy Carolinas, LLC Request to Adjust Electric Rates for the Cost of Demand-Side Management and Energy Efficiency Programs, N.C. Utils. Comm'n Docket No. E-7, Sub 1249 (Attached as **SACE/CCL Exhibit 6**).
[11] Id.
[12] See Rachel Gold et al., Next-Generation Energy Efficiency Resource Standards, Am. Council for an Energy Efficient Econ. (August 2019), available at https://www.aceee.org/sites/default/files/publications/researchreports/u1905.pdf

cumulative savings over the period 2014 - 2018.[13] Commissioners have also recently indicated their desire that Duke and stakeholders at the Collaborative work towards reaching higher levels of savings.[14]

To this end, a large number of clean energy and public interest advocates have contributed considerable amounts of time to this work at the Collaborative, while making clear that the 1% threshold is important to their participation in these efforts. For example, in 2019, the Collaborative prioritized exploring portfolio level opportunities and challenges and produced a summary report highlighting a range of program and policy opportunities to increase savings. The report also affirmed that clean energy and customer advocacy organizations at the Collaborative continue to desire that DEC sustain annual savings in excess of 1% of retail sales. In 2020, SACE, CCL, and other efficiency advocates in the Collaborative shifted focus towards development of specific program recommendations, detailed below, that could help to prevent savings declines and return to sustained annual savings levels in excess of 1% of retail sales. In 2021, SACE, CCL, and other stakeholders at the Collaborative are building on this past work by shifting towards development of a more specific and actionable plan to close the 1% savings gap. The aim is for the plan to include enough new energy efficiency opportunities to exceed 1% annual savings for the next six years, with sufficient redundancy and flexibility to achieve the goal even if not every individual component is implemented.

[13] The Merger Settlement with SACE, CCL, and the Environmental Defense Fund calls for annual energy savings of at least 1% of prior-year retail sales beginning in 2015 and cumulative savings of at least 7% over the period from 2014 through 2018. The Merger Settlement was approved by the Commission in Docket No. 2011-158-E.

[14] For example, Commissioner Ervin encouraged Duke Energy witnesses to pursue higher levels of efficiency savings at Duke's recent Integrated Resource Plan hearing in Docket Nos. 2019-224-E and 2019-225-E.

It would seem that such a plan would be particularly attainable for Duke Energy Carolinas, which (notwithstanding the 2020 pandemic year) has already delivered savings very near or above 1% for several years. Moreover, in this proceeding the Company is projecting savings for 2022 that fall only 0.04% short of the goal. It is reasonable to expect the Company to close this gap with a little focused effort, collaboration, and encouragement from the Commission.

B. The Market Potential Study used in Duke's 2020 Integrated Resource Plan ("IRP") underestimates the potential DSM/EE savings in Duke's territory.

In Duke's 2020 IRP proceedings, SACE, CCL, Sierra Club, and Natural Resources Defense Council filed comments analyzing Duke's IRPs, which introduced expert analysis on behalf of Jim Grevatt of the Energy Futures Group. Mr. Grevatt's analysis reviewed Duke's recent Market Potential Studies ("MPS"). He found that those studies significantly underestimate the potential DSM/EE savings in Duke's territory due to a variety of flaws. First, the MPS omitted emerging technologies and their potential savings, and instead only considered existing technology. Second, the MPS failed to evaluate nearly two dozen measures used in other jurisdictions. Third, the MPS failed to consider changes to customer engagement strategies or programs designs that may increase customer participation. Fourth, prior to performing the potential analysis the MPS removed all commercial and industrial customers who have opted out, thereby eliminating the efficiency savings potential for approximately 60% of DEC's non-residential load. Finally, DEC completed its MPS using the TRC test, which substantially undercounts savings benefits, rather than the UCT, which the Commission approved to replace the TRC test.[15]

[15] S.C. Pub. Serv. Comm'n Docket No. 2019-224-E, South Carolina Energy Freedom Act (House Bill 3659) Proceeding Related to S.C. Code Ann. Section 58-37-40 and Integrated Resource Plans for Duke Energy Carolinas, LLC, Direct Testimony and Exhibits of Jim Grevatt at 9-12; see also S.C. Pub. Serv.

All of these shortcomings suggest that the MPS, and the IRP that was based on it, substantially understate efficiency potential. It is important that the DSM/EE Rider and the IRP both fully reflect the full range of available cost-effective energy efficiency and demand response resources so that goals like reaching and exceeding 1% annual efficiency savings can be realized. Additionally, if the DSM/EE assumptions used in the IRP underestimate future potential, customers could wind up paying for more expensive power supply rather than investing in less expensive strategies to eliminate energy waste.

C. DEC has done little to formally advance the DSM/EE recommendations contributed by Collaborative members, undercutting the Company's opportunities to increase its overall efficiency savings.

The Collaborative provides a valuable vehicle for program development work, but to date there has been little to show for all the effort Collaborative members have contributed towards developing program concepts for inclusion in DEC's DSM/EE portfolio. For example, over the past two years, stakeholders at the Collaborative have submitted several program proposals for Duke's consideration, including:

- Energy Star Retail Products Platform (January 2019)
- Program Savings from Building Codes and Standards (January 2019)
- Low-Income Housing Tax Credit (March 2019)
- Residential Low-Income Single Family Heat Pump Water Heater Rental Program (June 2020)
- Non-Residential Multifamily Heat Pump Water Heater Rebate Program (June 2020)
- Manufactured Homes Retrofit Program (August 2020)
- Manufactured Home New and Replacement Programs (August 2020)

For each of the above program recommendations, the sponsoring stakeholder prepared supporting materials and presented them to the Collaborative, after which Duke took them

Comm'n Docket. No. 2013-198-E, Application of Duke Energy Carolinas, LLC for Approval of New Cost Recovery Mechanism and Portfolio of Demand-Side Management and Energy Efficiency Programs, Order No. 2021-32.

for internal review and consideration. However, there has been little visible action towards implementing these recommendations and Duke has yet to submit a program application to the Commission for approval based on any of the recommendations provided by members of the Collaborative. This lack of action on most of the recommendations above leaves stakeholders wondering what to expect after program recommendations are submitted. As it stands, there is no clear pathway to the Company either implementing program modifications directly, applying for Commission approval, or rejecting the recommendation (if that is their decision).

The recommendation that Duke appears to have done the most to advance concerns connecting projects that are receiving an allocation of Low-Income Housing Tax Credits ("LIHTC") with the Company's DSM/EE program offerings. Though this has not been developed into a discrete program offering, DEC reports that there are nine LIHTC projects currently in the pipeline with status listed as Contract Approval. Combined these are expected to yield savings of 2.6 GWh. The LIHTC program provides a reliable, annual pipeline of projects available for energy efficiency investments. In 2020, the North Carolina Housing Finance Agency awarded forty-two 9% LIHTC projects and an additional twenty-four tax-exempt bond projects. South Carolina Housing awarded seventeen 9% LIHTC projects in 2020.[16] DEC's initial efforts with LIHTC projects are a welcome step forward. We believe more can now be done to build on this initial success. To uncover even more savings potential, DEC should work with state agencies to ensure all LIHTC projects are automatically solicited to participate in the utility's applicable efficiency programs. Doing so would not only help DEC achieve significant new savings,

[16] S.C. State Housing & Dev. Auth., Housing Tax Credit (LIHTC), https://www.schousing.com/Home/HousingTaxCredits (last accessed May 14, 2021).

but also serve as a demonstration of how the Company can advance Collaborative recommendations towards formal program deployment, while tracking attributable savings.

D. Though DEC forecasts an increase in efficiency savings for its low-income programs relative to previous years, the need and opportunity for additional savings is considerably greater.

DEC's income qualified energy efficiency programs account for an estimated 9.8 GWh of system energy reductions in 2022,[17] which is approximately 2% of the Company's total residential energy savings. If achieved, this would be an 11% increase in total energy savings for DEC's low-income programs compared to its pre-pandemic performance. Though this increase is encouraging, DEC's low-income efficiency programs present additional, untapped savings potential, particularly in South Carolina.

DEC has more than 2.2 million residential customers,[18] nearly 30% of whom are at or below 200% of the Federal Poverty Level ("FPL"),[19] but DEC typically serves a little over 10,000 customers a year through its low-income programs (notwithstanding its far lower performance in 2020). Most of these participants receive the comparatively shallower savings provided by the Neighborhood Energy Saver ("NES") program, rather than the deeper savings offered through the Weatherization and Equipment Replacement ("WERP") program. And among NES program participants, not all who are served technically meet the 200% of FPL criteria, since eligibility is determined at the neighborhood level. Clearly the need for these programs greatly exceeds the capacity of DEC's current low-income program offerings.

[17] Evans Exhibit 1, *supra* note 7.
[18] Approximately 600,000 of DEC's customers are in South Carolina.
[19] FPL is the same level used by DEC to determine eligibility for its income qualified programs.

This level of need also reveals that the key factor limiting how many customers get served (and at what level of savings) is DEC's internal budget setting, not the scale of customer need. Unlike most non-income qualified efficiency programs DEC offers that are driven by individual customer demand, the NES and WERP programs are delivered by third parties (Honeywell and North Carolina Community Action Agency, respectively)[20] with fixed budgets that are set by DEC. For this reason, we strongly encourage DEC to expand its low income efficiency program budget.

Increased efficiency offerings to low-income customers are more important now than ever. For customers that struggled financially during the pandemic, EE improvements could provide extra money to help them afford current and past due electric bills that are now in repayment. DEC knows which customers have overdue balances and has the opportunity to target deployment of its efficiency program services directly to those customers. Participation in efficiency programs could even be matched with partial debt forgiveness. Ultimately, these steps could make enough of a difference for customers to complete their repayment plans and prevent uncollectible bills from being passed on to the general body of ratepayers. Doing so could also prevent disconnections and the attendant consequences that can result, like damaged credit scores, additional financial challenges, health risks, and in some cases eviction.

Programs to serve low-income customers with past due bills could come in a number of different forms, ranging from customer self-install kits combined with a personalized virtual consultation, to deeper retrofit programs potentially patterned after

[20] S.C. Pub. Serv. Comm'n Docket No. 2021-76-E, Application of Duke Energy Carolinas, LLC for Approval of Demand-Side Management and Energy Efficiency Rider 13, Decreasing Residential Rates and Increasing Non-Residential Rates, Exhibit 6 at page 5, https://dms.psc.sc.gov/Attachments/Matter/241a7ccf-6e0a-4dc1-a786-424f396c3d84.

those offered by DEC's WERP and a pilot program the Company is offering in Durham, North Carolina (the "Durham Pilot Program").[21] The Durham Pilot Program, which involved a modified delivery for the WERP program, offers particular promise as a model for South Carolina. This program included providing a larger than typical package of improvements and working with low-income customers with comparatively high energy intensity. In total, 205 homes were served, including 59 whose participation was made possible because they also received supplemental Helping Home Funds to address required health, safety, and incidental repair needs prior to the efficiency improvements. Insights gained from this program could lead to important lessons on how to deliver deeper savings to low-income customers with high energy intensity, including for customers with high energy burdens.

RECOMMENDATIONS

A. Recommendations to DEC for 2022 DSM/EE Portfolio Implementation

i. Work in good faith with members of the Collaborative to produce a plan on how best to exceed 1% annual savings in each of the next six years, to be periodically updated and presented to the Commission as an appendix to future DEC DSM/EE Rider applications.

DEC's past energy savings performance, which included delivering savings very near or above 1% for several years (notwithstanding the 2020 pandemic year), indicates that a plan to exceed 1% annual savings in each of the next six years is attainable. In this proceeding, DEC is projecting savings for 2022 that fall only 0.04% short of the goal.

[21] In response to a discovery request regarding pilot programs DEC has implemented that could inform future strategies to expand low-income efficiency program impacts in South Carolina, the Company identified only a pilot operated by DEP in Buncombe County, N.C., which pays for just a fraction of the savings value of efficiency improvements. But in its response, the Company made no mention of the Durham pilot program, which pays the full cost of efficiency measures with deeper savings and could help overcome the historic challenges with DEC's Income Qualified Weatherization Assistance program delivery in South Carolina. DEC Response to SACE et al. Data Request 1-4, S.C. Pub. Serv. Comm'n Docket No. 2021-76-E (Attached as **SACE/CCL Exhibit 7**).

Though the pandemic understandably disrupted the 2020 performance, DEC should pursue goals that improve and build on previous savings levels, rather than set progressively lower targets.

ii. Expeditiously finalize the evaluation and development of program recommendations proposed by Collaborative members for direct implementation or submission of program applications to the Commission for approval.

As noted above, Duke has yet to submit a program application to the Commission for approval based on any of the recommendations provided by members of the Collaborative, and there has been little visible action towards implementing these recommendations. CCL and SACE urge DEC to consider the recommendations offered by members of the Collaborative in good faith. Once each recommendation has been adequately considered, the Company should state clearly whether it adopts or rejects the recommendation, giving stakeholders valuable feedback and insight into the Company's decision-making process. More clarity and expeditious decision-making will make the Collaborative a more productive tool to help the Company achieve additional energy savings.

iii. Continue to focus on capturing additional measures that are capable of achieving deeper and longer-lived savings to maintain a more balanced and robust program portfolio going forward.

As we have expressed numerous times in previous years, we are concerned by DEC's heavy reliance on behavioral programs that have limited measure-life persistence. For example, just one behavioral residential program, My Home Energy Report made up over half of DEC's total savings in 2020 at 51% of reported system energy reductions. The MPS used to inform Duke's IRP likewise relied heavily of behavioral programs, which do

not accumulate savings over time and tend to be more expensive than other longer-lived measures.[22]

We urge the Company to continue to focus on capturing additional measures that are capable of achieving deeper and longer-lived savings. These measures should include adding to or modifying programs that target the largest residential end uses of electricity – such as space heating & cooling and water heating. This is not a suggestion to forego savings currently being captured by DEC's current portfolio, but rather for DEC to focus on deeper and longer lived measures to develop a more balanced portfolio with persistent savings.

iv. Increase its low-income efficiency program budget and work with the Collaborative on setting new budget and savings targets for its income-qualified programs to be reported to the Commission in its next DSM/EE Recovery Rider filing.

Though understandable, it is unfortunate that low-income efficiency programs were so significantly disrupted by the COVID-19 pandemic. Particurily in this era of economic hardship, energy efficiency improvements have the potential to provide low-income households with the extra money needed to afford necessities, including current and past due electric bills that are now in repayment. Given the significant population of low-income customers in DEC's territory who have not yet participated in DEC's energy efficiency programs, we urge the Company to increase its low-income efficiency program budget and work with the Collaborative to set more aggressive savings targets for these programs.

[22] S.C. Pub. Serv. Comm'n Docket No. 2019-224-E, Direct Testimony of Jim Grevatt at 12.

v. Quantify and analyze the energy savings associated with the Durham Pilot Program and work with the Collaborative to take the lessons learned to evaluate opportunities to modify or design new programs to assist low-income customers in achieving deep energy savings.

Finally, savings from DEC's income-qualified programs in South Carolina continue to lag behind the Company's performance in North Carolina, despite a significant need for such programs in DEC's South Carolina territory. We recommend that the Company work with the Collaborative to take the lessons learned from the Durham Pilot Program to evaluate opportunities to modify or design new programs in South Carolina that would improve low-income customers' access to programs that achieve deeper energy savings.

B. Recommendations to the Commission

i. Direct DEC to develop and submit to the Commission a supplemental filing in this docket indicating how the Company would achieve the 30.4 GWh savings required to close the gap between DEC's projected 0.96% annual savings in 2022 up to the 1% annual savings target.

Building on its recent past performance and the narrow gap between its projected 2022 efficiency savings levels and the target of 1% annual savings, DEC is in a unique position to identify and articulate how to best close the gap. The Company should do so now, while aiming to prioritize serving low-income customers with a significant portion of the remaining 30.4 GWh of savings required to close the gap between DEC's projected 0.96% annual savings in 2022 up to the 1% annual savings target. A request by the Commission to this effect, encouraging DEC to plan for and pursue the 1% target in 2022, would make a significant difference in the likelihood of this very attainable goal being achieved.

ii. Direct DEC to work in good faith with members of the Collaborative to produce a plan on how best to exceed 1% annual savings in each of the next six years, to be periodically updated and presented to the Commission as an appendix to future DEC DSM/EE Rider applications.

In last year's comments, we requested that the Commission inform the work done by the Collaborative by directing that: 1) DEC prioritize certain issues, particularly industrial opt-outs and its SC low-income programs, at the Collaborative; and 2) develop and report its plans for addressing these issues in its 2021 DSM/EE filing.[23] Unfortunately, progress at the Collaborative seems stalled, and DEC's 2022 forecast falls short of 1% savings. As a result, we urge the Commission to endorse the present work of the Collaborative to produce a plan for how best to exceed 1% annual savings in each of the next six years, and to direct DEC to include such a plan in its subsequent DSM/EE Rider filings. Without such an explicit directive, energy savings may continue to decline over time while innovative recommendations from the Collaborative remain unimplemented.

iii. Direct DEC to pursue increased energy savings for its income-qualified energy efficiency programs and report to the Commission its plan for continuing to do so in its 2022 DSM/EE rider filing.

Lastly, we recommend that the Commission require DEC to expand savings from its income-qualified programs in South Carolina in the Company's 2022 DSM/EE rider filing, particularly its income-qualified Weatherization and Equipment Replacement Program, while working with the Collaborative on how best to do so. Particularly in the wake of the pandemic, these programs should be capitalized on for the benefit of all DEC ratepayers.

[23] S.C. Pub. Serv. Comm'n Docket No. 2020-83-E, Comments of CCL, SACE, and S.C. State Conference of the NAACP at 14-15.

CONCLUSION

In conclusion, SACE and CCL support DEC's request for approval of Rider 13, but request that the Commission require DEC to pursue a 1% savings target in 2022, develop a plan with the Collaborative as to how best to exceed 1% annual savings in each of the next six years, improve on its low-income program savings in 2022, and report back to the Commission with plans on how it will address concerns in those areas.

Respectfully submitted this 14th day of May, 2021.

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I hereby certify that the parties listed below have been served via first class U.S. Mail or electronic mail with a copy of the *Intervenor Comments* of the South Carolina Coastal Conservation League and Southern Alliance for Clean Energy.

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This 14th day of May, 2021.

s/Kate Lee Mixson

SACE DR 1-19 First Data Request to Duke Energy Carolinas, LLC

	Source:	DSM		EE		Total Non-Residential Sales (kWh)	
		Actual 2020	Forecasted 2022	Actual 2020	Forecasted 2022	Actual 2020	Forecasted 2022
NC	Listebarger Exhibit 6	18,254,741,506	18,248,487,084	19,684,483,883	19,640,593,176	34,115,824,726	36,242,826,711
SC	R13 Exhibit 3 page 1	8,643,937,630	8,643,100,545	9,593,238,585	9,579,821,484	13,427,589,634	14,898,064,380
Total		26,898,679,136	26,891,587,629	29,277,722,468	29,220,414,660	47,543,414,360	51,140,891,091

SACE DR1-4

1-4. For each program in DEC's DSM/EE portfolio, please provide:

a. UCT and TRC cost-effectiveness test scores with corresponding total costs and benefits for 2016, 2017, 2018, 2019, and 2020, including:

i. A detailed explanation of the inputs and calculation methods used for UCT and TRC

ii. An illustrative example showing how the calculations are done using a common efficient HVAC measure.

b. The projected cost effectiveness scores for each program in the 2021 and 2022 forecasts;

Note: Due to the availability of actual participant costs, calculations of historical TRC prior to 2018 are unavailable.

Note: Minor variances in Total Portfolio NPV of AC and Program Costs due to rounding

	2016			2017			2018		
	NPV of AC	Program Cost	UCT	NPV of AC	Program Cost	UCT	NPV of AC	Program Cost	Participant Incentives
Appliance Recycling Program	59,758	(97,397)	-0.61	-	5,307	0.00	-	-	-
Energy Efficiency Education	3,695,507	2,126,509	1.74	3,597,724	2,077,611	1.73	2,863,153	1,992,260	480,232
Energy Efficient Appliances and Devices	82,262,218	24,069,774	3.42	105,352,687	30,340,728	3.47	135,840,645	42,687,244	36,512,751
HVAC Energy Efficiency	7,476,100	7,839,566	0.95	7,287,263	7,403,327	0.98	7,087,718	6,955,146	5,303,166
Income Qualified Energy Efficiency and Weatherization Assistance	2,984,760	4,792,436	0.62	3,185,867	5,505,992	0.58	4,253,631	6,490,735	4,835,515
Multi-Family Energy Efficiency	8,950,706	2,518,988	3.55	13,539,656	3,168,422	4.27	13,613,278	3,604,921	1,155,116
Energy Assessments	6,822,806	2,678,893	2.55	6,602,773	2,909,098	2.27	5,756,145	2,836,229	278,369
My Home Energy Report	20,423,954	10,822,444	1.89	21,728,369	13,812,250	1.57	22,682,074	12,765,286	-
PowerManager	54,179,776	13,644,970	3.97	61,074,105	14,021,500	4.36	61,920,744	14,423,610	7,213,282
Non Residential Smart Saver Custom Technical Assessments	9,572,687	2,034,308	4.71	10,272,302	2,139,875	4.80	67,297	407,293	7,794
Non Residential Smart Saver Custom	39,025,086	7,356,509	5.30	34,693,083	7,304,838	4.75	23,319,056	6,068,902	3,495,543
Energy Management Information Services	-	-		-	-		-	-	-
Non Residential Smart Saver Energy Efficient Food Service Products	2,474,312	324,117	7.63	959,251	306,488	3.13	431,621	235,605	172,207
Non Residential Smart Saver Energy Efficient HVAC Products	3,344,669	1,473,991	2.27	2,958,336	1,560,769	1.90	2,809,849	1,620,748	1,418,533
Non Residential Smart Saver Energy Efficient Lighting Products	120,392,639	39,622,944	3.04	240,054,511	66,689,770	3.60	146,516,321	25,872,380	22,136,715
Non Residential Energy Efficient Pumps and Drives Products	1,574,965	471,930	3.34	3,070,044	528,937	5.80	1,617,544	277,785	221,861
Non Residential Energy Efficient ITEE	777,601	285,430	2.72	523	61,215	0.01	3,025	36,875	3,528
Non Residential Energy Efficient Process Equipment Products	279,184	125,947	2.22	530,295	162,413	3.27	226,697	67,509	51,787
Non Residential Smart Saver Performance Incentive	-	35,670	0.00	8,958	320,559	0.03	1,671,568	479,610	279,680
Small Business Energy Saver	55,685,830	15,360,852	3.63	63,169,894	17,350,972	3.64	46,827,028	15,977,993	14,439,122
Smart Energy in Offices	1,843,559	1,061,729	1.74	1,067,480	891,010	1.20	143,266	219,748	-
Business Energy Report	302,497	263,169	1.15	696	126,680	0.01	-	-	-
EnergyWise for Business	574,590	470,304	1.22	2,530,761	2,484,618	1.02	2,279,619	3,062,816	595,564
PowerShare	43,889,394	14,291,024	3.07	41,482,644	13,316,535	3.12	36,008,770	12,922,977	12,213,583
Disallowed Costs from 2015 Program Cost Audit (Order E-7 Sub 1105, dated 8/25/16)									
Total Portfolio	**466,592,598**	**151,574,107**	**3.08**	**623,167,221**	**192,488,915**	**3.24**	**515,939,051**	**159,005,671**	**110,814,347**

i UCT is the sum of the net present value of avoided capacity, energy and T&D divided by total program costs
TRC is the sum of the net present value of avoided capacity, energy and T&D divided by the sum of total program costs and the participant costs less participant incentives

ii See the UCT and TRC columns for part a for the formulas used to calculate the UCT and TRC scores.

Example of HVAC Measure:

NPV Avoided Energy = $195
NPV Avoided Capacity = $38
NPV Avoided T&D = $100
Total NPV Avoided Cost = $333
Program Cost = $270
Participant Incentive = $250
Participant Cost (net) = $525
UCT = $333/$270 = 1.23
TRC = $333/($270-$250+$525) = 0.61

			2019						2020					
NPV Participant Costs (net)	UCT	TRC	NPV of AC	Program Cost	Participant Incentives	NPV Participant Costs (net)	UCT	TRC	NPV of AC	Program Cost	Participant Incentives	NPV Participant Costs (net)	UCT	TRC
			-	-					-	-	-	-	-	-
-	1.44	1.89	2,519,645	1,644,077	457,087	512,554	1.53	1.48	1,312,408	1,113,485	236,103	258,066	1.18	1.16
18,585,822	3.18	5.49	101,640,687	40,433,533	33,722,488	26,603,606	2.51	3.05	60,871,143	22,124,101	16,886,727	15,167,158	2.75	2.98
8,572,619	1.02	0.69	7,079,940	7,402,907	5,311,650	7,107,099	0.96	0.77	7,811,427	7,563,287	5,801,975	7,609,171	1.03	0.83
-	0.66	2.57	3,570,760	7,344,325	5,590,035	5,662,865	0.49	0.48	1,094,864	2,787,490	2,033,569	1,958,074	0.39	0.40
-	3.78	5.56	10,815,659	3,681,262	1,008,869	1,126,658	2.94	2.85	2,156,883	1,613,839	337,362	232,051	1.34	1.43
-	2.03	2.25	4,413,585	3,153,757	160,084	286,787	1.40	1.35	4,582,748	3,358,880	164,844	226,437	1.36	1.34
-	1.78	1.78	23,361,954	10,558,344	-	-	2.21	2.21	23,927,899	12,749,651	-	-	1.88	1.88
-	4.29	8.59	69,783,157	13,386,942	7,654,406	-	5.21	12.17	74,785,083	14,303,277	9,209,212	-	5.23	14.68
24,493	0.17	0.16	691,285	296,006	165,648	750,359	2.34	0.78	518,862	330,629	94,787	204,660	1.57	1.18
13,128,691	3.84	1.49	35,884,367	8,873,872	5,987,025	17,933,319	4.04	1.72	15,898,503	5,771,790	2,481,286	6,512,064	2.75	1.62
-		-	-	-	-	-		-	-	-	-	-		-
332,863	1.83	1.09	412,886	339,996	251,163	660,970	1.21	0.55	230,241	533,411	389,347	382,034	0.43	0.44
1,481,662	1.73	1.67	5,516,665	2,208,364	1,950,484	2,962,253	2.50	1.71	7,423,034	2,450,713	2,120,437	3,638,965	3.03	1.87
53,989,440	5.66	2.54	105,608,459	20,834,766	16,543,407	39,082,405	5.07	2.43	71,994,024	13,098,851	9,721,810	27,201,346	5.50	2.35
360,094	5.82	3.89	720,816	189,172	102,810	228,894	3.81	2.29	757,993	167,464	95,170	268,706	4.53	2.22
2,491	0.08	0.08	1,385	44,335	19,591	1,615	0.03	0.05	1,734	15,179	549	1,149	0.11	0.11
49,376	3.36	3.48	416,343	119,843	99,668	173,953	3.47	2.14	236,299	29,681	18,834	32,431	7.96	5.46
1,420,247	3.49	1.03	2,238,186	785,165	402,997	1,711,020	2.85	1.07	2,035,780	751,724	414,798	1,072,733	2.71	1.44
22,510,536	2.93	1.95	25,661,729	11,421,399	10,040,202	15,796,578	2.25	1.49	15,315,818	6,933,130	5,852,828	8,879,847	2.21	1.54
-	0.65	0.65	-	-	-	-		-	-	-	-	-		-
-		-	-	-	-	-		-	-	-	-	-		-
-	0.74	0.92	2,728,428	3,687,462	884,345	-	0.74	0.97	2,131,933	2,941,282	864,460	-	0.72	1.03
-	2.79	50.76	42,072,382	13,022,816	12,288,629	-	3.23	57.30	34,867,428	12,082,697	11,083,075	-	2.89	34.88
120,458,335	**3.24**	**3.06**	**445,138,318**	**149,428,343**	**102,640,586**	**120,600,935**	**2.98**	**2.66**	**327,954,102**	**110,720,562**	**67,807,173**	**73,644,891**	**2.96**	**2.81**

2021					
NPV of AC	Program Cost	Participant Incentives	NPV Participant Costs (net)	UCT	TRC
-	-	-	-	-	-
3,022,045	2,158,411	628,362	607,050	1.40	1.41
26,094,584	9,897,967	7,978,934	9,950,260	2.64	2.20
4,513,202	5,542,288	3,071,400	4,242,261	0.81	0.67
5,297,222	7,525,216	6,178,677	5,972,345	0.70	0.72
14,210,714	4,521,600	1,235,752	1,207,811	3.14	3.16
7,542,872	5,688,276	485,352	674,748	1.33	1.28
22,825,595	12,064,044	-	-	1.89	1.89
82,948,182	19,166,071	10,700,422	-	4.33	9.80
2,779,419	1,030,840	494,160	2,941,228	2.70	0.80
29,177,559	9,501,528	5,940,475	21,237,506	3.07	1.18
-	-	-	-		-
1,428,585	985,505	781,365	1,612,105	1.45	0.79
2,369,564	1,614,541	1,393,367	1,899,905	1.47	1.12
94,718,674	22,630,821	16,903,125	38,488,210	4.19	2.14
1,234,566	396,467	251,070	367,232	3.11	2.41
28,640	44,284	21,616	38,461	0.65	0.47
382,954	109,491	77,544	137,296	3.50	2.26
7,088,559	2,204,158	1,460,345	5,958,176	3.22	1.06
23,817,495	10,276,621	9,340,151	15,705,926	2.32	1.43
-	-	-	-		-
-	-	-	-		-
3,489,310	5,580,274	2,813,992	-	0.63	1.26
43,471,361	12,886,651	12,569,384	-	3.37	137.02
376,441,104	**133,825,056**	**82,325,493**	**111,040,520**	**2.81**	**2.32**

2022					
NPV of AC	Program Cost	Participant Incentives	NPV Participant Costs (net)	UCT	TRC
-	-	-	-	-	-
3,145,767	2,264,641	654,001	631,821	1.39	1.40
34,272,497	15,072,228	11,819,651	16,953,447	2.27	1.70
5,299,434	5,219,878	3,791,800	5,212,782	1.02	0.80
6,175,591	8,220,067	6,832,601	6,849,158	0.75	0.75
9,487,870	3,049,816	1,968,943	711,165	3.11	5.29
7,619,294	5,247,884	479,185	668,724	1.45	1.40
21,443,834	11,379,147	-	-	1.88	1.88
76,782,152	18,025,787	9,488,763	-	4.26	8.99
2,749,737	1,378,847	554,376	2,870,477	1.99	0.74
25,673,184	8,883,313	5,143,170	18,553,262	2.89	1.15
-	-	-	-		-
661,380	271,042	164,136	985,343	2.44	0.61
9,554,016	3,143,794	2,611,680	4,395,437	3.04	1.94
104,317,008	27,455,462	20,275,377	42,216,273	3.80	2.11
1,118,710	370,116	253,320	402,195	3.02	2.16
17,576	25,950	12,856	10,309	0.68	0.75
556,380	234,358	189,635	255,761	2.37	1.85
3,385,427	1,948,037	1,510,921	2,819,011	1.74	1.04
55,375,251	18,189,200	15,319,498	29,148,203	3.04	1.73
-	-	-	-		-
-	-	-	-		-
2,190,679	4,726,799	3,136,831	-	0.46	1.38
41,017,747	12,058,258	11,670,152	-	3.40	105.69
410,843,534	**147,164,622**	**95,876,895**	**132,683,368**	**2.79**	**2.23**

SACE DR 1-21

1-21. Please provide a spreadsheet of total energy savings achieved by each of the Company's DSM/EE programs, in GWh, for 2018, 2019 and 2020.

	Residential Programs	2018 System Energy Reduction (GWh)	2019 System Energy Reduction (GWh)	2020 System Energy Reduction (GWh)
	EE Programs			
1	Energy Efficiency Education	5.53	6.71	3.38
2	Energy Efficient Appliances and Devices	195.21	187.88	111.20
3	HVAC Energy Efficiency	6.37	7.33	7.69
4	Low Income Energy Efficiency and Weatherization Assistance	6.85	8.78	2.17
5	Multi-Family Energy Efficiency	20.92	21.34	4.04
6	Residential Energy Assessments	7.72	7.89	7.89
7	Total for Residential Conservation Programs	242.60	239.93	136.37
8	My Home Energy Report	344.76	328.44	332.11
9	Total Residential Conservation and Behavioral Programs	587.36	568.37	468.48
10	Power Manager®	-	-	-
11	Total Residential	587.36	568.37	468.48

Non-Residential Programs

	EE Programs	2018 System Energy Reduction (GWh)	2019 System Energy Reduction (GWh)	2020 System Energy Reduction (GWh)
12	Non Residential Smart Saver Custom Technical Assessments	0.08	1.93	1.41
13	Non Residential Smart Saver Custom	30.33	52.52	21.16
14	Non Residential Smart Saver Energy Efficienct Food Service Products	0.74	1.00	0.50
15	Non Residential Smart Saver Energy Efficienct HVAC Products	2.91	7.53	9.27
16	Non Residential Smart Saver Energy Efficienct Lighting Products	178.17	163.56	109.55
17	Non Residential Smart Saver Energy Efficienct Pumps and Drives Produc	2.67	1.46	1.40
18	Non Residential Energy Efficienct ITEE	0.02	0.01	0.01
19	Non Residential Smart Saver Energy Efficienct Process Equipment Produ	0.33	0.73	0.57
20	Smart $aver(R) Non Residential Performance Incentive Program	3.27	4.55	5.96
21	Small Business Energy Saver	76.70	53.67	30.61
22	Smart Energy in Offices	1.49	-	-
23	Total for Non-Residential Conservation Programs	296.71	286.97	180.45
24	EnergyWise for Business	2.60	2.70	1.30
25	PowerShare®	-	-	-
26	Total for Non-Residential DSM Programs	2.60	2.70	1.30
27	Total Non Residential	299.31	289.67	181.75
28	Total All Programs	886.67	858.05	650.23

(1) My Home Energy Report impacts reflect cumulative capability as of end of vintage year.

(2) Total System DSM programs allocated to Residential and Non-Residential based on contribution to retail system peak

Duke Energy Carolinas

SACE DR 1-18

	At Meter		At Plant		
2020 Incremental Energy Savings	612,158,071	kWh	650,226,345	kWh	Evans Exhibit 1 page 4 (2020) line 28
2020 Opt Out Electricity Sales - NC	19,684,483,883	kWh	20,908,602,882	kWh	Listebarger Exh 6, Line 10
2020 Opt Out Electricity Sales - SC	9,593,238,585	kWh	10,189,813,313	kWh	Exhibit 3 pg 1 of 2, Line 12
2019 System Retail Billed Electricity Sales	80,109,038	MWh	85,090,778	MWh	2019 RAC Report
2022 Incremental Energy Savings	766,625,571	kWh	814,299,715	kWh	Evans Exhibit 1 page 5 (2022) line 28
2022 Opt Out Electricity Sales - NC	19,640,593,176	kWh	20,861,982,744	kWh	Listebarger Exh 6, Line 14
2022 Opt Out Electricity Sales - SC	9,579,821,484	kWh	10,175,561,843	kWh	Exhibit 3 pg 1 of 2, Line 16
2021 System Retail Electricity Sales	79,703,572	MWh	84,660,098	MWh	2020 Fall Forecast, sales at meter

1. Please provide a calculation of DSM/EE portfolio savings with and without line loss (1) as a percentage of total annual sales; and (2) as a percentage of annual sales to non-opt-out customers:
a. for the year 2020 (as a percentage of 2019 retail sales);

	At Meter		At Plant	
2020 Incremental Energy Savings	612,158.07	MWh	650,226.35	MWh
2019System Retail Electricity Sales	80,109,038	MWh	85,090,778	MWh
Savings as % of 2019 Sales	0.76%		0.76%	
2020 Incremental Energy Savings	612,158.07	MWh	650,226.35	MWh
2019 System Retail Electricity Sales, net of 2019 Opt Out	50,831,315	MWh	53,992,362	MWh
Savings as % of 2019 Sales, net of 2019 Opt Out	1.20%		1.20%	

1. Please provide a calculation of DSM/EE portfolio savings with and without line loss (1) as a percentage of total annual sales; and (2) as a percentage of annual sales to non-opt-out customers:
b. forecasted for the year 2022 (as a result of forecasted 2021 sales).

	At Meter		At Plant	
2022 Incremental Energy Savings	766,625.57	MWh	814,299.72	MWh
2021 System Retail Electricity Sales	79,703,572	MWh	84,660,098	MWh
Savings as % of 2021 Sales	0.96%		0.96%	

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CCL_SACE DR 1-14

2019 Incremental Energy Savings	794,856,771	kWh	Year 2019 Exhibit 2 line 28 - adjusted for line loss
2019 Opt Out Electricity Sales - NC	20,042,218,854	kWh	Miller Exh 6, Line 8
2019 Opt Out Electricity Sales - SC	10,446,567,023	kWh	Exhibit 3 pg 1 of 2, Line 12
2018 System Retail Billed Electricity Sales	81,399,234	MWh	2018 RAC Report

2021 Incremental Energy Savings	715,710,984	kWh	Year 2021 Exhibit 2 line 27 - adjusted for line loss
2021 Opt Out Electricity Sales - NC	20,419,288,797	kWh	Miller Exh 6, Line 12
2021 Opt Out Electricity Sales - SC	10,490,870,196	kWh	Exhibit 3 pg 1 of 2, Line 16
2020 System Retail Electricity Sales	80,141,016	MWh	2019 Fall Forecast, sales at meter

1. Please provide a calculation of DSM/EE portfolio savings with and without line loss (1) as a percentage of total annual sales; and (2) as a percentage of annual sales to non-opt-out customers:
a. for the year 2019 (as a percentage of 2018 retail sales);

2019 Incremental Energy Savings	794,856.77	MWh
2018 System Retail Electricity Sales	81,399,234	MWh
Savings as % of 2018 Sales	0.98%	

2019 Incremental Energy Savings	794,856.77	MWh
2018 System Retail Electricity Sales, net of 2019 Opt Out	50,910,448	MWh
Savings as % of 2018 Sales, net of 2019 Opt Out	1.56%	

1. Please provide a calculation of DSM/EE portfolio savings with and without line loss (1) as a percentage of total annual sales; and (2) as a percentage of annual sales to non-opt-out customers:
b. forecasted for the year 2021 (as a result of forecasted 2020 sales).

2021 Incremental Energy Savings	715,710.98	MWh
2020 System Retail Electricity Sales	80,141,016	MWh
Savings as % of 2020 Sales	0.89%	

Duke Energy Carolinas

CCL_SACE DR 2-2

2014 Incremental Energy Savings	508,689,316	kWh	Year 2014 Exhibit 2 - line 31 adjusted for line loss
2014 Opt Out Electricity Sales - NC	17,153,650,420	kWh	workpapers
2014 Opt Out Electricity Sales - SC	9,992,960,564	kWh	workpapers
2013 System Retail Billed Electricity Sales	76,021,887	MWh	2013 RAC Report
2015 Incremental Energy Savings	614,743,741	kWh	Year 2015 Exhibit 2 - line 32 adjusted for line loss
2015 Opt Out Electricity Sales - NC	17,296,168,323	kWh	Miller Exhibit 6
2015 Opt Out Electricity Sales - SC	9,824,240,223	kWh	Exhibit 3 pg 1 of 2
2014 System Retail Billed Electricity Sales	78,277,836	MWh	2014 RAC Report
2016 Incremental Energy Savings	754,838,256	kWh	Year 2016 Exhibit 2 - line 33 adjusted for line loss
2016 Opt Out Electricity Sales - NC	17,541,642,770	kWh	Miller Exhibit 6
2016 Opt Out Electricity Sales - SC	10,115,080,343	kWh	Exhibit 3 pg 1 of 2
2015 System Retail Billed Electricity Sales	79,056,620	MWh	2015 RAC Report
2017 Incremental Energy Savings	879,954,382	kWh	Year 2017 Exhibit 2 - line 33 adjusted for line loss
2017 Opt Out Electricity Sales - NC	17,749,899,702	kWh	Miller Exhibit 6
2017 Opt Out Electricity Sales - SC	10,211,024,604	kWh	Exhibit 3 pg 1 of 2
2016 System Retail Billed Electricity Sales	79,090,737	MWh	2016 RAC report
2018 Incremental Energy Savings	811,152,170	kWh	Year 2018 Exhibit 2 - line 33 adjusted for line loss
2018 Opt Out Electricity Sales - NC	18,347,183,120	kWh	Miller Exh 6, Line 10
2018 Opt Out Electricity Sales - SC	10,257,713,985	kWh	Exhibit 3 pg 1 of 2, Line 14
2017 System Retail Billed Electricity Sales	77,059,079	MWh	2017 RAC Report

2. Please provide a calculation of cumulative DSM/EE portfolio savings (1) as a percentage of total annual sales; and (2) as a percentage of annual sales to non-opt-out customers from 2014 through 2018, taking into account line loss.

2014 Incremental Energy Savings	508,689.32	MWh
2013 System Retail Electricity Sales	76,021,887	MWh
2013 System Retail Electricity Sales, net of 2014 Opt Out	48,875,276	
Savings as % of 2013 Sales	0.67%	
Savings as % of 2013 Sales, net of 2014 Opt Out	1.04%	
2015 Incremental Energy Savings	614,743.74	MWh
2014 System Retail Electricity Sales	78,277,836	MWh
2014 System Retail Electricity Sales, net of 2015 Opt Out	51,157,427	
Savings as % of 2014 Sales	0.79%	
Savings as % of 2014 Sales, net of 2015 Opt Out	1.20%	
2016 Incremental Energy Savings	754,838.26	MWh
2015 System Retail Electricity Sales	79,056,620	MWh
2015 System Retail Electricity Sales, net of 2016 Opt Out	51,399,896	
Savings as % of 2015 Sales	0.95%	
Savings as % of 2015 Sales, net of 2016 Opt Out	1.47%	

First Data Request to Duke Energy Carolinas
Southern Alliance for Clean Energy and South Carolina Coastal Conservation League
Public Service Commission of South Carolina, Docket No. 2021-76-E
May 6, 2021
Date of Response: May 12, 2021

1-4. Beyond the standard offerings provided through the Income Qualified Weatherization and Neighborhood Energy Saver programs, please describe any pilot programs DEC has initiated and/or is currently exploring to provide energy efficiency services to low income customers in South Carolina

RESPONSE: The Duke Energy Low-Income Weatherization Pay for Performance Program pilot is running in Buncombe County, North Carolina. This multi-year pilot program is two years old and is being evaluated for expansion of the program in additional Duke Energy territories, including South Carolina.

The Low-Income Weatherization Pay for Performance Pilot Program (Pilot) in Buncombe County North Carolina provides monetary incentives to local weatherization assistance providers and other non-profit organizations involved in weatherizing residential low-income households. Incentive payments are based on the kilowatt-hours (kWhs) saved from the additional EE measures installed. EE measures such as attic or wall insulation, air sealing, refrigerator replacement, lighting, or water measures could qualify for the incentives. The Pilot Program seeks to provide additional funding to weatherization assistance organizations that would allow them to extend EE more deeply into the projects they undertake. This is likely to include the deployment of additional EE measures that may or may not be covered by traditional weatherization assistance organizational funding, but it could also include weatherization of additional homes.

Provided by: Lynda Shafer, Senior Strategy and Collaboration Manager